

Amendment  
Serial No.09/192,674

Docket No.PHN16,762A

### REMARKS

Entry of this Amendment and reconsideration are respectfully requested in view of the amendments made to the claims and for the remarks made herein.

Claims 1-9 are pending and stand rejected. Claims 1-5 and 9 have been amended to correct an error in form.

Claims 1-9 stand rejected under 35 USC 103(a) as being unpatentable over Ng (USP no. 5,146,325) in view of de Haan ("True-Motion Estimation with 3-D Recursive Search Block Matching).

Applicant respectfully disagrees with and explicitly traverses the reason for rejecting the claims. However, in the interest of advancing the prosecution of this matter, the claims have been amended to more clearly state the invention. No new matter has been added. Support for the amendments may be found on at least 4 lines 5-15, which illustrate the relationship of the blocks associated with the motion vectors being adjacent to the selected block.

Ng discloses a video decompression system of decompressing compressed image data wherein odd and even field of video signal are independently compressed in sequences of intraframe and interframe compression modes. Ng illustrate in Fig. 3 an exemplary compressor apparatus which may be utilized for compressing both even and odd fields according to the sequence illustrated in Fig. 1C. The Office Action refers to Fig. 3 for teaching the elements estimating first motion vectors, generating prediction errors, combining the first motion vectors etc. The Office Action further states that Ng fails to teach the filtering step or using the second motion vectors for generating the prediction errors.

With regard to the reference to Fig. 3, Ng teaches that "[p]redictive compression consists of determining motion vectors which indicate 16x16 blocks of pixels from a prior I field ... A predicted field is generated using the motion vectors and data from the current field ... to generate residues. A discrete cosine transform is then performed on 8x8 blocks of the residues... The motion vectors plus the residue coefficients are ... additively combined to form the coded P fields." Hence, Ng teaches generating a finer

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set of DCT coefficients and fails to teach or suggest determining a second set of motion vectors as is recited in the claims.

de Haan discloses a recursive block-matching motion estimation algorithm using only eight candidate vectors. The Office Action refers to de Haan as disclosing the filtering step in that de Haan discloses dividing the data blocks into four sub-blocks (i.e., dividing 16x16 blocks into 4 8x8 blocks). However, a reading of the section of the de Haan reference referred to (i.e. section VII) reveals that de Haan teaches that the generation of the motion vectors for the four sub-blocks is based on the motion vector associated with the macro-block enclosing the four sub-blocks.

Hence, contrary to the statements made in the Office Action, de Haan fails to provide any motivation to perform a filtering step using information from adjacent blocks as is recited in the claims.

A claimed invention is prima facie obvious when three basic criteria are met. First, there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings therein. Second, there must be a reasonable expectation of success. And, third, the prior art reference or combined references must teach or suggest all the claim limitations.

With reference to claim 1, neither Ng nor da Haan, individually or in combination, teach or suggest all the elements recited in the above referred-to claims. More specifically, neither Ng nor da Haan teach "estimating (ME) first motion vectors (MVc, MVl, MVr, MVa, MVb) associated with a set of first objects of a fixed size said motion vectors MVl, MVr, MVa, MVb being associated with first objects adjacent to a first object associated with the MVc motion vector or filtering (MVPF) every occurrence of said first motion vectors (MVc, MVl, MVr, MVa, MVb) to obtain second motion vectors (MV1, MV2, MV3, MV4) for second objects having a fixed size-smaller than said first objects fixed size ", as is recited in the claims. Hence, even if there were some motivation to combine the teachings of the cited references, which applicant believes does not exist, the combined device would fail to teach all the features recited in independent claim 1.

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Accordingly, the invention recited in claim 1 is not rendered obvious by the teachings of the cited reference, as the combined device fails to recite all the elements claimed in independent claim 1.

Having shown that the combined device fails to disclose all the elements claimed, applicant submits the reason for the rejection has been overcome and can no longer be sustained. Applicant respectfully requests withdrawal of the rejection and allowance of the claim.

With regard to the remaining independent claims, these claims recite subject matter similar to that recited in claim 1 and were rejected citing the same references used in rejecting claim 1. Thus, the remarks made in response to the rejection of claim 1 are also applicable in response to the rejection of the remaining independent claims. In view of the amendments made to the claims and for the remarks made with regard to the rejection of claim 1, which are reasserted, as if in full, in response to the rejection of the remaining independent claims, applicant submits that the reason for the rejection of these claims has been overcome and the rejection can no longer be sustained. For at least this reason, applicant respectfully requests withdrawal of the rejection and allowance of the claims.

The other claims in this application are each dependent from the independent claim discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

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For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

Russell Gross  
Registration No. 40,007

Date: February 27, 2006

  
By: Steve Cha  
Attorney for Applicant  
Registration No. 44,069

**Mail all correspondence to:**  
Russell Gross, Registration No. 40,007  
US PHILIPS CORPORATION  
P.O. Box 3001  
Briarcliff Manor, NY 10510-8001  
Phone: (914) 333-9624  
Fax: (914) 332-0615